

CLAIMS

I claim:

1. A door lock control system, comprising:
  - a door mounted in a door frame;
  - a door lock associated with the door to lock and unlock the door;
  - control means to lock and unlock the door lock; and,
  - a vibration sensor associated with the control means, the control means causing the door lock to be unlocked when a vibration above a certain level is sensed by the vibration sensor.
2. The door lock control system of claim 1, and further comprising:
  - the door lock is a magnetic lock.
3. The door lock control system of claim 1, and further comprising:
  - the vibration sensed by the vibration sensor is an earthquake or a bomb explosion.
4. The door lock control system of claim 1, and further comprising:
  - the vibration sensor includes a permanent magnetic connected to a pendulum, a magnetic contact positioned near the permanent magnet, and a relay switch.
5. The door lock control system of claim 1, and further comprising:
  - the control means to lock and unlock the door lock further comprises:

a low voltage DC power source;

a backup battery;

a relay switch; and,

the vibration sensor.

6. The door lock control system of claim 5, and further comprising:  
the low voltage DC power source, the backup battery, the relay switch, and the vibration sensor are all contained within a control box.

7. The door lock control system of claim 6, and further comprising:  
the control box is mounted at a location remote from small vibrations caused by the door.

8. The door lock control system of claim 6, and further comprising:  
the control box is mounted to a rigid wall or column remote from the door.

9. A method of controlling a lock on a door, comprising the steps of:  
maintaining a door in a locked state;  
monitoring for vibrations near the door;  
determining if the monitored vibration is above a certain level;  
and,

unlocking the door if the vibrations is above the certain level.

10. The method of controlling a lock on a door of claim 9, and further comprising the steps of:  
the step of monitoring for vibrations includes monitoring for an

earthquake or a bomb explosion.

11. The method of controlling a lock on a door of claim 9, and further comprising the steps of:

the step of determining if the monitored vibration is above a certain level includes the step of determining if the vibration is above 0.1 g.

12. A control box, comprising:

a box;

a door hinged to the box;

a DC power supply mounted in the box;

a backup battery mounted in the box;

a terminal and fuse board mounted in the box; and,

a vibration sensor mounted in the box.

13. The control box of claim 12, and further comprising;

the DC power supply is a low voltage power supply.

14. A vibration sensor, comprising;

a hollow body;

a top plate mounted to a top of the body;

a pendulum attached to the top plate;

a permanent magnet attached to the pendulum;

a bottom plate mounted to a bottom of the body;

a magnetic contact switch mounted to the bottom plate;

a weight displaceable along the pendulum;  
a marking on the weight; and,  
a scale on the body, the marking and the scale forming a  
means to determine a position of the weight along the pendulum.

15. The vibration sensor of claim 14, and further comprising:

a second box secured to a side of the body;  
a relay switch secured within the second box; and,  
a wire to electrically connect the relay switch to the magnetic  
contact switch.

16. The vibration sensor of claim 15, and further comprising:

the pendulum includes a threaded outer surface, and the weight  
includes a hole having threads which engage the threads of the  
pendulum.

17. The vibration sensor of claim 15, and further comprising:

a front plate;  
a cutout portion in the front plate;  
a transparent plate; and,  
the transparent plate having a hole therein and positioned near  
to the magnet on the pendulum such that a tool can be inserted  
through the hole to displace the magnet.

18. The vibration sensor of claim 15, and further comprising:

a first eye-bolt connected to the pendulum;

a second eye-bolt connected to the first eye-bolt;  
a hole in the top plate; and,  
the second eye-bolt being adjustably secured to the top plate  
through the hole by a nut secured to the second eye-bolt.

19. The vibration sensor of claim 15, and further comprising:

the bottom plate including a relay switch; and,  
a plurality of wires extending out from the bottom plate.

20. The vibration sensor of claim 17, and further comprising:

the cutout portion is of such size so as to allow for the position  
of the weight on the pendulum and a space between the magnet and  
the contact switch to be observed through the cutout portion; and,

a hole in the transparent plate located near the magnet of the  
pendulum.

21. The vibration sensor of claim 15, and further comprising:

an opening in the second box; and,  
indication means visible through the hole to indicate a status of  
the sensor.

22. The vibration sensor of claim 21, and further comprising:

the indication means includes a red light and a green light, the  
green light indicating a ready status of the sensor and the red light  
indicating a displaced position of the pendulum.

23. The vibration sensor of claim 22, and further comprising:

a buzzer mounted to the second box.

24. The vibration sensor of claim 14, and further comprising:
  - a relay switch integral with the bottom plate;
  - a wire to connect the relay switch with the magnetic contact switch; and,
  - wires extending out from a hole in the bottom plate.